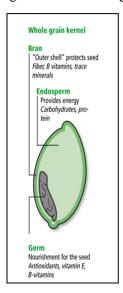
# PUBLIC LANGE INSTRUCTION

### Whole Grains

#### What are grains?

Grains are the seeds of cereal grasses. Cereal grains are grown in greater quantities worldwide and provide more food energy to the human race than any other crop. Grains can be divided into two subgroups: whole grains and refined grains.



Whole grains contain the entire grain kernel, which consists of three parts: the bran, the germ, and the endosperm. If grains keep all three parts of the original grain in their original proportions after milling, they still qualify as whole grains.

**Refined grains** have been milled, meaning the bran and germ are removed. This process also removes most of the iron, B vitamins, and dietary fiber. Some refined grains are enriched. This means iron, folic acid, and certain B vitamins are added to the grains after processing.

#### Make your grains whole!

The 2010 Dietary Guidelines recommend that Americans "make half their grains whole." This means most people should consume three or more servings of whole grains each day. The Dietary Guidelines define a serving of whole grains (or one ounce equivalent) as 1 slice of 100% whole grain bread, 1 cup of 100% whole grain cold cereal, or ½ cup of 100% whole grain hot cereal, cooked pasta, rice, or other grain

#### **Whole Grain Tips**

- 3,00
- Substitute a whole-grain product for a refined product (e.g. whole grain bread for white bread; brown rice instead of white rice)
- Replace some of the flour in homemade cookies, cakes, and breads with whole grain flour or oatmeal
- Use whole grain bread or cracker crumbs in meatloaf
- Add whole wheat pasta to dishes such as macaroni and cheese, spaghetti, and lasagna

#### **Food Ingredient Labels**

Food labels list ingredients in descending order by weight. The most prevalent ingredient is listed first; the least prevalent ingredient is listed last. If the first ingredient listed contains the word "whole" followed by the name of the grain, it is safe to assume the product is mostly whole grain. Look for words like whole grain oats, whole wheat, whole corn, and brown rice as the first ingredient.

#### Whole Grains

Grains are a great source of many vital nutrients, including dietary fiber, many B vitamins, and minerals. Research has shown that including whole grains as part of a healthy diet may help to reduce the risk of some chronic diseases, such as cardiovascular disease, stroke, diabetes, and certain cancers.

As part of a healthy diet, fiber can help to reduce blood cholesterol levels, thus reducing the risk of heart disease. Fiber also promotes proper bowel function and can help curb appetite by providing a feeling of fullness.

The B vitamins (thiamin, riboflavin, niacin, and folate) play a key role in metabolism and help to regulate the nervous system. In addition, folate reduces the risk of certain birth defects and may help protect against heart disease and certain cancers.

Iron, magnesium, and selenium are key minerals provided by whole grains. Minerals are needed in small amounts to help regulate certain body processes, such as energy metabolism, oxygen transport, and immune function.

#### Are all Brown Breads Whole Grain?

Not necessarily. Some breads have brown coloring added to them, which is listed on the ingredient label as "caramel coloring."



## Which of the following products are true whole grain products?

A.



**Ingredients**: Rice, whole grain rice, sugar, salt, calcium carbonate, barley malt extract, freshness preserved by Vitamin E (mixed tocopherols) and BHT.

B.



Ingredients: Whole grain wheat, whole grain brown rice, white whole grain oats, wheat gluten, crystallized cane juice, natural flavor (soybean oil, natural flavoring), wheat bran.

C.



**Ingredients**: Whole wheat flour, water, cracked wheat, wheat gluten, fructose, yeast, soybean oil, salt, soy lecithin, corn syrup, grain vinegar, calcium carbonate, soy flour, whey, nonfat milk.

D.



**Ingredients**: Untreated high gluten wheat flour, filtered water, stone ground whole wheat flour, crystalline corn fructose, oats, ground flaxseed, sorghum flour, wheat fiber, wheat germ, sunflower oil, barley malt, yeast, potato flour, salt, cornmeal.

Notice all four products contain a whole grain claim on the package.
However, in order to be considered a whole grain product, one of the following must be true:

- 1. The first listed ingredient must be a whole grain
- 2. If multiple grains are used in the product, the weight of the whole grains added together must be at least 51% of the total grain weight of the product
- 3. The product contains the following whole grain health claim: "Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol may reduce the risk of heart disease and some cancers."

(July 1999, American Food and Drug Administration, FDA)

Answer: B & C

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